

IV.—*Notices of British Fungi.* By REV. M. J. BERKELEY, M. A.  
No. I.

THOUGH the number of British Fungi described in the last volume of the English Flora amounts to nearly 1400, it is remarked in that work, that this is by no means to be considered as more than an approximation to a perfect list of the species indigenous to Great Britain. Indeed many of considerable interest occurred while the sheets were passing through the press, which were inserted in the body of the work, with the exception of a few which are noticed in the list of addenda, and several have lately fallen in my way, which at present are unrecorded, as belonging to the British Flora. It is proposed, therefore, from time to time, after the plan of the admirable communications of a similar description by M. Montagne, in the Archives de Botanique, and the new series of the Annales des Sciences Naturelles, to give detailed descriptions and figures of such as are new or of any peculiar interest, but, as regards those which are well known, mere references to some good authority, with occasional remarks, and indication of the places where they occurred. New localities of the rarer species will also be inserted, and any additional information respecting such as are already recorded. These by way of distinction will be marked with an asterisk.

1. *Agaricus mastoideus*, Fr. Syst. Myc. vol. i. p. 20. Mastrocephalus, Batt. Fung. Hist. p. 30. tab. 10. fig. A.—This very interesting and beautiful Agaric occurred sparingly amongst moss, under blackthorn in a wood at King's Cliffe, Northamptonshire, towards the end of October 1835. There can be little doubt that it is identical with the species which Battarra had in view, and which Fries has adopted from his figure and description. Like *Ag. excoriatus* it is very nearly allied to *Ag. procerus*, but is distinct from both in its slender habit and papillose scales.

Pileus  $1\frac{3}{4}$  inch across,  $\frac{3}{4}$  inch high, very strongly umbonate, with a depression round the umbo, subcarnose; epidermis breaking up into small umber papillæ, which are larger and more scattered towards the margin. Gills remote, rather narrow, yellowish. Stem  $3\frac{1}{2}$  inches high, slender, strongly attenuated upwards, incrassated at the base, sunk into the substance of the pileus, minutely villososquamose, filled within with cottony fibres. Ring deflexed, scarcely moveable. My specimens were rather past maturity, I cannot, therefore, assert positively that the stem in the young plant is so tough as described by Battarra.

Tab. II. fig. 1. *a.* *Agaricus mastoideus*. nat. size; *b.* vertical section.

\* 2. *Ag. pelianthinus*, Fr. Syst. Myc. vol. i. p. 112.—This species,

which appears to have been noticed only by Bolton, occurred abundantly at King's Cliffe, October 1835. The gills are sprinkled over with short purple hairs, like those on the lip of *Orchis fusca*, which on the edge are arranged in fascicles. Smell strong, somewhat like that of *Ag. sulphureus*. Sporidia white. Habit approaching to that of some species of the subgenus *Psathyra*.

3. *Ag. rubidus*, n. s.—Amongst mosses on the mould of a pot containing a foreign *Polypodium*, consisting of peat and sand, in a hot-house at Milton, Northamptonshire, March 1, 1836.

Pileus  $\frac{1}{3}$  inch broad, convex at length umbilicate, the margin sometimes slightly wavy membranaceous, finely silky white or grayish, acquiring at length a pale ruddy tinge. Gills broad, ventricose, adnate, with frequently a more or less distinct tooth, in consequence of which they are sometimes at length decurrent, rose-coloured, as far as I could observe not clothed with any spiculæ. Sporidia rose-coloured, elliptic. Stem  $1\frac{1}{2}$ –2 lines high, thickest above, white or grayish like the pileus, quite solid, minutely silky. Smell like that of new flour.

This species belongs clearly to the subgenus *Eccilia* of the second series *Hyporhodium*, and is quite distinct from all described by Fries.

Tab. II. fig. 2. *a.* *Ag. rubidus*, nat. size; *b.* vertical section of three states, do; *c.* Sporidia highly magnified.

\* 4. *Ag. glaucopus*, Schæff. Fr. Syst. Myc. vol. i. p. 224.—The plate of Sowerby referred to by Persoon and Fries for this species, belongs rather to *Ag. callochrous*, *a.* and in consequence the description given in the English Flora, which was made with an especial view to it. The true plant, which occurred at King's Cliffe, at the end of October 1835, is one of the finest of our Agarics.

\* 5. *Ag. speciosus*, Fr. Obs. 2. p. 1.—Since the account of this species was given in the Addenda to the English Flora, I have seen Letellier's Supplement to Bulliard, which contains at t. 623. *a.* (under *Ag. volvaceus*,) and t. 645, figures of *Ag. gloiocephalus*, D. C. His figure accords precisely with the plant I have in view, except that there is no indication in it of villosity on the stem and volva, but, as it appears to me, there are no characters to distinguish it from *Ag. speciosus*. The volva is by no means obliterated, the stem not equal, but always more or less attenuated upwards, and sometimes even bulbous, and one of the specimens is almost four inches broad. The peculiar manner in which the volva passes under the stem is also the same.

6. *Polyporus cinctus*, n. s.—On a very rotten plank from an old house, King's Cliffe.

The first growth of this highly curious species consists of small erect scattered tufts of radiating strigose fibres, somewhat resembling those which clothe the pileus of *Pol. vulpinus* and its allies, but finer. Many of these remain barren, and would be considered as an *Ozonium*; but under favourable circumstances a distinct hymenium  $1\frac{1}{2}$  line thick, with a free even abrupt vertical circumference is formed in the centre of each tuft. Numbers of these at length become confluent, the strigæ towards the centre of the mass are obliterated, while those towards the circumference form an erect fringe to the patch, the edges of the hymenium coming occasionally adnate with the strigæ. If the whole be now removed from the wood, the base of each original fasciculus is often visible. Pores so minute as to be quite invisible to the naked eye, angular, sometimes a little sinuous with a rather ragged edge; dissepiments extremely thin. The colour of the whole is pale ochraceous, with more or less of a tawny tinge when dry. The specimens with which I met had been exposed to the weather for some time, and probably, when quite fresh, were nearly white. The species appears to me quite distinct, and its mode of growth very peculiar.

Tab. II. fig. 3. *a.* Various states of *Polyporus cinctus*, nat. size; *b.* a portion of the hymenium from the centre of one of the fascicles; *c.* a vertical section of a portion of the hymenium at the circumference of a patch; *d.* orifices of pores; *b. c. d.* more or less magnified.

7. *Thelephora puteana*, Schum. Fr. Syst. Myc. vol. i. p. 448.— On deal in a closet with a brick floor in a dairy, with a northern aspect, King's Cliffe.

I cannot refer my plant accurately to any of the varieties described by Fries in his *Elenchus*, the specimens themselves varying from almost perfect evenness to considerable inequality of surface, with various tints of olive, tawny, ferruginous, cinereous, &c. in the same patch. Those which grew on the under side of the shelf were the most rugged, and the patches less continuous, while others which spread from the perpendicular painted front horizontally over the brick floor, were almost even with a broad soft ochraceous margin. When placed after being gummed on paper, and preserved in the herbarium for several weeks in the original locality, where the fungus had been entirely destroyed by a solution of corrosive sublimate, and the wood work in consequence in an unusually damp season having become quite dry, which before was constantly dripping, the whole in twelve hours recovered its original fleshy appearance, and was studded with drops of coffee-coloured moisture. It should be observed that my plant when rubbed has a disagreeable fishy odour.

How far it may agree with *Th. fœtida*, Ehr., formerly presumed by Fries a state of *Th. puteana*, but now rather considered as a form of *Th. stabularis*, I am unable to say.

8. *Th. arida*, Fr. El. i. p. 197.—In the inside of decayed hawthorn, Rockingham Forest. This species when placed in the same closet as the foregoing remained perfectly dry.

\* 9. *Pyronema marianum*, Carus and Nees v. Esen. Nov. Act. Leop., &c. vol. xvii. pt. 1. p. 369, tab. 27. *Thelephora carbonaria*, Bertero in Hook. Herb. Eng. Fl. vol. v. p. 2, p. 169.—In the same month and year in which this curious plant, first discovered by Bertero at Juan Fernandez, occurred in England, it was met with in great abundance, by the celebrated anatomist Dr Carus at Marienbad, by whom, with the concurrence of Nees Von Esenbeck, a new genus was proposed in the last part of the above cited transactions. As this appears to be an excellent one, though very difficult of definition, I take the present opportunity of adopting it, with a slight alteration of one phrase, in the character given by Nees Von Esenbeck in an appendix to Dr Carus's paper, which appears to me calculated to mislead, and to be contrary even to Nees Von Esenbeck's own views, who appears to have worded it as it stands in deference to the description given by the learned discoverer of the plant in Germany, rather than to his own better judgment. Dr Carus, however, appears to have paid but little attention to fungi, and therefore, though any thing coming from such an observer deserves ample consideration, there is less scruple in not following him exactly. The asci which are highly developed, as in the superior *Pezizæ*, are accompanied by paraphyses which, under a high magnifier, were found to contain globose orange-coloured granules. The true elliptic sporidia are copiously given out from the plant when laid upon a piece of glass; the contents of the more slender filaments either lose their colour completely, or are also given out, which, however, has not been observed. I suspect the former to be the real state of the case, the granules becoming invisible from transparency. That the paraphyses should contain granules is probably by no means unusual. Such would, I believe, be found the case with high magnifiers in *Peziza humosa*, *granulata*, &c. where a great part of the colour of the hymenium arises from the coloured paraphyses. The matter, however, deserves investigation, as the presumed (but not observed) evacuation of the more slender cells in the plant before us, if confirmed, would be highly curious. Till this point, however, be clearly proved, it appears to me much better to consider them as the same organs with the paraphyses in *Peziza*. The generic character will then stand thus :

*Pyronema*, Car.—Resupinate, effused; hymenium furnished with highly developed asci containing large elliptic sporidia, accompanied by paraphyses. Circumference byssoid.

That given by Nees Von Esenbeck stands thus :

Resupinate, effused. Asci of the hymenium of two kinds, each bearing sporidia; the more slender with globose coloured sporidia, the wider with larger oval hyaline erumpent sporidia. Circumference byssoid.

Besides *Pyronema marianum*, *Thelephora sulphurea* is also referred to this genus, which will come next to *Thelephora*.

The propriety of such reference is perhaps at present uncertain. I do not restore the original specific name of Bertero, though infinitely preferable to that given by Dr Carus, which refers to the circumstance of the plant being pointed out to him by his daughter, as it would be only adding to the number of synonyms with which mycology is already overburdened.

\* 10. *Peziza rosæ*, Pers. Fr. Syst. Myc. vol. ii. p. 109.—Introduced as British on the authority of unnamed specimens in Captain Carmichael's collection. It occurred in October 1835, at Lambley Notts, and Fineshade, Northamptonshire.

11. *Pez. sanguinea*, Pers. Fr. Syst. Myc. vol. ii. p. 110.—On fir-wood, Beeston Notts, Nov. 1835.

12. *Pez. fusarioides*, n. s. Berk. Brit. Fung. Fasc. 2, ined.—On stems of nettles with or without *Fusarium tremelloides*. Apethorpe, Northamptonshire, March, April, 1836.

At first sight, this beautiful species so strongly resembles in habit *Fusarium tremelloides*, that it is very difficult to believe that it can be anything more than a more perfect form of the same plant, and in consequence it has probably been overlooked. Cups, scarce a line in diameter, shallow, scattered or gregarious, originating beneath the cuticle, scattered or collected in patches, at first subglobose, but slightly attached below, gradually expanding and more adnate with a rather thick, even, or flexuous border, orbicular or elongated, sometimes confluent bright orange. Asci clavate, slightly flexuous, accompanied by slender linear paraphyses, which are sometimes longer than the asci. Substance firm, not tremelloid, as in the *Fusarium*, which it so much resembles. Its nearest ally appears to be *Peziza axillaris*, Nees.

Tab. II. Fig. 4. *a.* *Peziza fusarioides*, nat. size; *b.* do. magnified; *c.* a young plant seen from beneath, do.; *d.* asci and paraphyses, highly magnified.

\* 13. *Tremella foliacea*, Pers. Syn. p. 626.—On stumps of birch,

Wittering, Northamptonshire.—The state hitherto described as British is the purple-violet variety. Sporidia subelliptic.

14. *Sclerotium medullare*, n. s. Berk. Brit. Fung. Fasc. 2. ined.—At King's Cliffe, in the inside of stems of *Pteris aquilina*, which had been rotting from the previous summer, in a heap by the borders of a wood in an exposed situation. I found it only in one spot, but after a diligent search obtained a tolerable supply of specimens. At first entirely inclosed in the soft contents of the stem, subglobose, or more generally oblong, brown, then black, even, black within, with a slight shade of olive; as it swells the stem is generally split, and occasionally it protrudes and assumes a more or less sinuous form. When dry it is irregularly and coarsely corrugated, whitish within; the dark colour of the flesh is, however, restored after it has been for some time immersed in water. Outer skin, when viewed by transmitted light with a high magnifier, composed, as in *Sclerotium durum*, of roundish irregular cells.

Tab. III. Fig. 5. *a.* *Sclerotium medullare*, nat. size; *b.* do. magnified; *c.* do. do. when dry; *d.* a slice of the fresh plant; *e.* a thin slice of the outer coat; *f.* a slice of the dried plant; *d. e. f.* all highly magnified.

\* 15. *Polyangium vitellinum*, Lk. Fr. Syst. Myc. vol. ii. p. 305.—On loose stumps in a wood at King's Cliffe. My specimens exactly agree with the figure of Ditmar. Occasionally the sporangia vary a little from the usual oblong ovate form, in consequence of mutual pressure towards the centre of the uterus.

\* 16. *Sphaeria rubiginosa*, Pers. Fr. Scler. Suec. n. 142.—This species, introduced on the authority of a single specimen from Captain Carmichael, is not uncommon, on fallen decorticated branches of service and crab in Rockingham Forest.

\* 17. *S. favacea*, Fr. Scler. Suec. n. 306.—On birch, Wittering, Northamptonshire.

18. *S. detrusa*, Fr. Scler. Suec. n. 6.—On barberry, Wansford, Northamptonshire.

19. *S. velata*, Fr. Scler. Suec. n. 225.—On lime, King's Cliffe.

20. *S. microstoma*, Pers. Fr. Scler. Suec. n. 185.—On blackthorn, Apethorpe, Northamptonshire.

\* 21. *S. hypodermia*, Fr. Scler. Suec. n. 32.—On elm, common.

22. *S. xanthostroma*, Mont. Fr. Scler. Suec. n. 444.—On a stick used as a marker in a garden at King's Cliffe, but not completely developed.

23. *S. pantherina*, Berk. Brit. Fung. Fasc. I.—On *Pteris aquilina*, King's Cliffe, &c.

24. *S. decedens*, Fr. Scler. Suec. n. 81.—On hazel, common.

25. *S. sanguinea*, var. *cicatricum*, Berk. Brit. Fung. Fasc. 2, ined.—A marked variety with very much of the habit *S. coccinea*, but without any stroma; growing in patches upon the scars left by the fallen leaves of dead twigs of *Buxus sempervirens*, and occasionally in the axil before their leaf has fallen. It has occurred once only at Apethorpe. Perithecia much more minute than in other states of *S. sanguinea*, so as, except from their bright colour, to be scarce distinguishable to the naked eye, crowded, scarlet, subglobose, with a distinct very obtuse short papilla, collapsed laterally when dry. Asci linear, large for the size of the plant. There were no sporidia in my specimens gathered towards the end of winter.

Tab. III. Fig. 6. *a.* Plant nat. size; *b.* do. magnified; *c.* asci highly magnified.

26. *S. herpotricha*, Fr. Scler. Suec. n. 52.—King's Cliffe. On reeds and grasses.

27. *S. arundinis*, Fr. Syst. Myc. vol. ii. p. 510.—On reeds with the foregoing. Sporidia exactly resembling those of some species in the division *Platystomæ*.

28. *S. angelicæ*, n. s. Berk. Brit. Fung. Fasc. 2 ined.—On dead mostly decorticated stems of *Angelica sylvestris*, King's Cliffe, March 1836.

So minute as to be quite invisible to the naked eye, except the stem on which it grows is wet, when extremely minute black dots, the protruded tips of the ostiola, are perceived arranged in single rows upon the ribs, but not connected in any way, so that the species is better arranged amongst the *Caulicolæ* than *Seriatae*. Perithecia black, or brownish when viewed by transmitted light, immersed in the woody part of the stem, their bases resting upon the commencement of the pith, globose, furnished with a somewhat abrupt conical subobtusate neck, which protrudes just beyond the surface of the stem, and is pierced with a minute round orifice. Contents of the perithecia pink, oozing out, and forming a little halo round the ostiolum. Asci minute, linear, containing a few subelliptic sporidia, accompanied by variously sized globules of an oily matter. The perithecia are sometimes slightly rugged, and the neck wrinkled transversely by the pressure of the woody fibres. The only species which, as far as I am aware, can at all be compared with the present is *S. duplex*, Sow. figured on the stem of some umbelliferous plant. Of this, as stated in the English Flora, there is no specimen preserved in his Herbarium, but if the figure and description are to be regarded, the present plant, which has not the ostiolum in the slightest degree dilated, cannot be identical with it. At all events, it is not the same species

with *S. duplex*, Fr. on *Sparganium*, &c. and is remarkable for its coloured jelly, and, if the character be constant, for the oily globules contained in it.

Tab. III. Fig. 7. *a.* *Sphæria angelicæ*, nat. size; *b.* two perithecia in situ magnified; *c.* contents of the perithecia highly magnified.

29. *Physarum metallicum*, n. s. On a decorticated stick at Clifton Notts, November 1835.

Peridium subglobose, slightly depressed, a line or more in breadth, sessile, (not adnate) quite smooth, very delicate, of a most beautiful metallic appearance, bursting irregularly. Sporidia and flocci pink-grey. This most beautiful plant connects *Lycogala* with *Physarum*, in consequence of its bright coloured sporidia. The peridium is, however, perfectly simple.

Tab. III. Fig. 8. *a.* *Physarum metallicum*, nat. size; *b.* do. magnified; *c.* flocci and sporidia highly magnified.

30. *Isaria brachiata*, Schum. Fr. Syst. Myc. vol. iii. p. 279.— On stems of hollyhock, Apethorpe, March 1836.

31. *Isaria citrina*, Pers. Fr. l. c. On the ground amongst leaves, King's Cliffe, exactly answering in every point to the plate of Ditmar.

32. *Stilbum rigidum*, Pers. Fr. Syst. Myc. vol. iii. p. 302.— On rotten wood, King's Cliffe.

33. *Stilbum piliforme*, Pers. Fr. Syst. Myc. vol. iii. p. 303.— With the former.

34. *Stilbum anomalum*, n. s. On the dead leafless shoot of some hypnum on a loose stump, King's Cliffe.

About half a line high, stem black, yellow above, generally smooth but sometimes furnished with a few short flocci towards the base, head subglobose, yellow, when placed in water falling away into subfusiform sporidia, which rest upon a flat disc-like expansion of the upper part of the stem. Exceedingly like *Stilbum xanthocephalum*, but agreeing with *S. atractium* in its subfusiform sporidia. Its consistence is not, however, at all gelatinous. Is the character of fusiform sporidia of sufficient importance to separate this species from *S. xanthocephalum*? I have a plant with fusiform sporidia resembling in every other respect *Stilbum rigidum*.

Tab. III. Fig. 9. *a.* Plant, nat. size; *b.* do magnified; *c.* do. placed in water highly magnified.

35. *Psilonia arundinis*, Desm. Fr. Syst. Myc. vol. iii. p. 451.— With *Sphæria arundinis* and *S. herpotricha*.

36. *Stilbospora angustata*, Pers. Fr. Syst. Myc. vol. iii. p. 485.— On *Cornus sanguinea*. Milton, Northamptonshire.

37. *Melanconium bicolor*, Nees, Fr. Syst. Myc. vol. iii. p. 488.— On birch, King's Cliffe.